

## **Sustainable Systems: Weeks 2-4:**

### **Program A:**

#### **Hydrogen and Solar Cars/Boats**

### **Tuning In:**

*Look at Hydrocar (electric/solar car) (Glenn)*

*How solar panels work*

*Look at solar panels (hands on)*

### **Task**

**Make Cars/boats? in pairs or threes**

**Each car needs to include**

- solar panels
- solar motors
- wheels/axles

*Look at designs...*

**Wheelbarrows**

**Bring in bicycles**

**Deflate tyres.**

**Look at - weight ratio, wind resistance, input verses output**

**and movement**

**Look at an old car/tractor to see how parts of the motor move**

**Tubs of water to look at hydrodynamics**

**Old guttering - use for races**

### **Process writing**

**Write the process for making the solar car**

**(Could you be done on Keynote)**

**Journal - process of making the car.**

### **Assessment Task**

**Design car/boat to race**

**Create team motto/logo**

**Race the cars**

**Graph the results**

**Keep Journal**

### **Resources:**

**Glenn..solar car**

**Video on how solar cars work**

[http://  
videos.howstuffwork  
s.com/  
howstuffworks/178-  
how-solar-cars-  
work-video.htm](http://videos.howstuffworks.com/howstuffworks/178-how-solar-cars-work-video.htm)

**Solar car kits - show some designs**

[http://original.solar-  
active.com/car.htm](http://original.solar-active.com/car.htm)

**Need kitchen scales to weigh boat**

**Glue gun**

**Kids design rubric to meet design output. (Peter from Strth Primary - good at this)**